

Notice of Allowability

Application No.

09/895,529

Examiner

Dalip K Singh

Applicant(s)

DOYLE ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9-30-04.
2. ☒ The allowed claim(s) is/are 1-8,10-19,21-24 and 26-34.
3. ☒ The drawings filed on 29 June 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-8, 10-19, 21-24 and 26-34 are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter: Prior art does not disclose or render obvious wherein the time allocator comprises a first circuit to permit a graphics device instruction from a graphics application to direct the graphics-rendering engine to process instructions associated with a second independent image while waiting for an asynchronous event to occur for a first independent image as per independent claim 1; allocation of the concurrent use of the single graphics-rendering engine between the instructions associated with the first and the second instruction stream by using a timing mechanism as per independent claim 19; allocation of time use of the graphics-rendering engine between each independent image; permitting, via a software instruction from a graphics application, the processing of instructions associated with a second image while waiting for an asynchronous event to occur to a first image as per independent claim 23; a first track circuit to track the period of elapsed time that a particular register uses the graphics-rendering engine; and a second circuit to convert the programmable elapsed period of time into an equivalent number of clock cycles as per independent claim 30; a first circuit implementing a software instruction, the software instruction to yield time allotted for instructions associated with a first independent image to use the graphics-rendering engine over to instructions associated with a second independent image as per independent claim 33; instruction transports that comprise an instruction memory area, a first register to define a start and an end to the instruction memory area and a

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memory access engine to fetch and deliver the instructions from the instruction memory area to the graphics-rendering engine as per independent claim 34. Flurry reference (U.S. Patent No. 5,455,958) discloses a graphics rendering engine with a time allocator but does not render obvious the processing of instructions associated with a second independent image while waiting for an asynchronous event to occur for a first independent image; the conversion of the programmable elapsed period of time into an equivalent number of clock cycles. Dependent claims 2-8 and 10-18 from independent claim 1; dependent claims 21 and 22 from independent claim 19; dependent claims 24, 26-29 from independent claim 23; dependent claims 31 and 32 from independent claim 30 include similar matter allowable.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Dalip K. Singh** whose telephone number is **(703) 305-3895**. The examiner can normally be reached on Mon-Thu (8:00AM-6:30PM) Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella**, can be reached at **(703) 308-6829**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

dks

November 12, 2004

A handwritten signature in black ink, appearing to read "Matthew C. Bella".

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600